What is claimed is:

1. A plastid transformation vector for stably transforming a plastid, said plastid vector comprising, as operably linked components, a first flanking sequence, a DNA sequence coding for a protective antigen capable of expression in a plastid, and a second flanking sequence.

2. The vector of claim 1 wherein said protective antigen is a bacterial antigen.

3. The vector of claim 2 further comprising an appropriate regulatory sequence.

4. The vector of claim 3 having a plurality of said appropriate regulatory sequences comprising a promoter operative in said plastid, a 5' untranslated region (UTR), and a 3' untranslated region.

5. The vector of claim 4 wherein, said components are arranged, in the 5' to 3' direction as follows: said first flanking sequence, said promoter, said 5' untranslated region (UTR), said DNA sequence coding for a bacterial protective antigen, said 3' untranslated region, and said second flanking sequence.

6. The vector of claim 5 wherein said bacterial protective antigen is anthrax protective antigen (PA).

7. The vector of claim 1 further comprising a DNA sequence encoding a selectable marker.

8. The vector of claim 7 wherein said DNA sequence encoding a selectable marker encodes an antibiotic-free selectible marker.

9. The vector of claim 8 wherein said DNA sequence encoding a selectable marker encodes BADH.

10. The vector of claim 7 wherein said DNA sequence encoding a selectable marker encodes an antibiotic resistance selectible marker.

11. The vector of Claim 1, wherein the plastid is selected from the group consisting of chloroplasts, chromoplast, amyloplast, proplastide, leucoplast, and etioplast.

12. The vector of Claim 1, wherein the vector is competent for stably integrating into a plastid of different plant species and wherein the flanking DNA sequences are homolgous to sequences in a spacer region of said plastid and wherein said flanking sequences are conserved in the plastid of different plant species.

13. The vector of Claim 12, wherein said spacer region is a transcriptionally active spacer region.

14. The vector of Claim 1, wherein the vector further comprises a DNA sequence coding for a chaperonin.

15. A plant stably transformed with the vector of Claim 2.

16 A progeny of the plant of claim 15.

17. A seed of the plant of claim 15.

18. A part of the plant of claim 15, comprising a plastid including said DNA sequence coding for a protective antigen.

19. A part of the plant of claim 16, comprising a plastid including said DNA sequence coding for a protective antigen.

20. The vector of claim 3 wherein said appropriate regulatory sequence comprises a promoter operative in said plastid.

21. The vector of Claim 2, wherein the vector further comprises a DNA sequence coding for a chaperonin.

22 The vector of Claim 1, wherein said DNA sequence coding for a protective antigen is located in an inverted repeat region of said plastid genome.

23 The vector of Claim 1, wherein said DNA sequence coding for a protective antigen is located in a single copy region of said plastid genome.

24. The vector of Claim 1, further comprising a plastid promoter.

25. The vector of Claim 24, wherein said promoter is a 16S sRNA promoter.

26. The vector of Claim 2, wherein said DNA sequence coding for a bacterial antigen is regulated by plastid 5' and 3' elements.

27. The vector of Claim 26, wherein said plastid 5' and 3' elements are 5' and 3' elements of psbA.

28. The vector of Claim 26, wherein said plastid 5' and 3' elements are 5' and 3' elements of Cry2Aa2 UTR.

29 The vector of Claim 3, wherein said regulatory elements comprise a T7 gene 10 leader sequence.

30. The vector of Claim 3, wherein said regulatory elements comprise elements of a T7 gene 10 leader sequence and elements of Cry2Aa2 UTR.

31. The vector of claim 2 wherein said bacterial antigen is an antigen of *Y. pestis*.

32. The vector of claim 31 wherein said bacterial antigen comprises both the V and F1 antigens of *Y. pestis*.

33. The vector of claim 32 wherein said bacterial antigen comprises a fusion protein of V and F1 antigens of *Y. pestis*.

34. A process for producing a protective antigen comprising:

integrating a plastid transformation vector according to claim 1 into the plastid genome of a plant cell;

growing said plant cell to thereby express said protective antigen.

35. The process of claim 34 wherein said protective antigen is competent to produce an immunogenic response in a mammal.

36. A vaccine for conferring immunity to *Bacillus anthracis* to a mammal comprising anthrax immunogenic protective antigen, wherein said vaccine is free of both anthrax edema factor and anthrax lethal factor.

37. An orally-administrable vaccine for conferring immunity to *Bacillus anthracis* to a mammal comprising anthrax immunogenic protective antigen.

38. A process for vaccinating a mammal against *Bacillus anthracis* comprising feeding to said mammal an effective amount of the vaccine of claim 37.

39. An orally-administrable vaccine for conferring immunity to *Yersina pestis* to a mammal comprising an F1-V fusion protein.

40. A process for vaccinating a mammal against *Yersina pestis* comprising feeding to said mammal an effective amount of the vaccine of claim 39.

41. A plant plastid comprising a DNA coding sequence for a protective antigen.

42. The plastid of claim 41 wherein said protective antigen is a bacterial antigen.

43. A plant cell comprising a plastid according to claim 42.

44. A plant comprising a plastid according to claim 42.